AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (previously presented): A drive unit including

an electric motor (1),

a drive unit casing (2) accommodating therein the electric motor,

an inverter (3) that controls the electric motor, and

a flow passage (4) of a refrigerant that cools the inverter, the drive unit characterized in that the inverter is mounted on the drive unit casing such that a heat sink (53) united with a substrate of the inverter defines a space (R) on a portion thereof opposed to the drive unit casing,

the space is communicated to the flow passage of the refrigerant,

the heat sink comprises heat-sink side fins (56) extending into the space toward the drive unit casing, and

the heat-sink side fins and the drive unit casing contact with each other in a state of low thermal conduction, wherein the low thermal conduction is the line contact for the heat-sink side fins and drive unit casing.

2. (currently amended): A drive unit including

an electric motor,

a drive unit casing accommodating therein the electric motor,

an inverter that controls the electric motor, [[and]]

an inverter casing accommodating therein the inverter, and

a flow passage of a refrigerant that cools the inverter, the drive unit characterized in that the inverter is mounted on the drive unit casing such that a heat sink united with a substrate of the inverter defines a space on a portion thereof opposed to the drive unit casing,

the space is communicated to the flow passage of the refrigerant,

the heat sink comprises heat-sink side fins extending into the space toward the drive unit casing,

separation means (6) for preventing thermal conduction is provided in the space, wherein the separation means comprises a low thermal conductive member (61), and wherein the separation means is positioned on a mating surface of the inverter casing and a mating surface of the drive unit casing, and

both the heat-sink side fins and the drive unit casing contact directly with the separation means.

3. (cancelled)

4. (previously presented): A drive unit including

an electric motor,

a drive unit casing accommodating therein the electric motor,

an inverter that controls the electric motor, and

a flow passage of a refrigerant that cools the inverter, the drive unit characterized in that the inverter is mounted on the drive unit casing such that a heat sink united with a substrate of the inverter defines a space on a portion thereof opposed to the drive unit casing,

the space is communicated to the flow passage of the refrigerant,

the heat sink comprises heat-sink side fins extending into the space toward the drive unit casing,

separation means (6) for preventing thermal conduction is provided in the space, wherein the separation means comprises a plurality of separation members (60) with a space (R3) therebetween, and

both the heat-sink side fins and the drive unit casing contact directly with the separation means.

5. (original): The drive unit according to claim 2, wherein the separation means comprises a laminated member formed by laminating a low thermal conductive member on a separation member.

6. (previously presented): The drive unit according to claim 2, wherein the drive unit casing comprises drive-unit-casing side fins (22) extending into the space toward the heat sink.

7. (original): The drive unit according to claim 6, wherein the space is compartmented by the separation means into a first chamber (R1) facing toward the heat sink and a second chamber (R2) facing toward the drive unit casing.

8. (previously presented): The drive unit according to claim 2, wherein the inverter is received in an inverter casing (5) composed of a member separate from the inverter with a substrate thereof fixed to a bottom wall of the inverter casing and constitutes a heat sink, of which a substrate is united with the bottom wall of the inverter casing.

9. (previously presented): The drive unit according to claim 2, wherein the inverter together with the heat sink (33) that is united with a substrate thereof are received in an inverter casing composed of a member separate from the inverter.

10. (original): The drive unit according to claim 7, wherein the heat-sink side fins and the drive-unit-casing side fins cooperatively generate a common refrigerant flow pattern within the space.

11. (previously presented): The drive unit according to claim 6, wherein the low thermal conductive member is shaped to follow contact portions of the heat-sink side fins and the drive-unit-casing side fins.

12. (new): A drive unit including

an electric motor,

a drive unit casing accommodating therein the electric motor,

an inverter that controls the electric motor, and

a flow passage of a refrigerant that cools the inverter, the drive unit characterized in that the inverter is mounted on a mount of the drive unit casing such that a heat sink united with a substrate of the inverter defines a space on a portion thereof opposed to the drive unit casing, wherein the mount of the drive unit casing is flat,

the space is communicated to the flow passage of the refrigerant,

the heat sink comprises heat-sink side fins extending into the space toward the drive unit casing,

separation means (6) for preventing thermal conduction is provided in the space, wherein the separation means comprises a low thermal conductive member (61), and

both the heat-sink side fins and the drive unit casing contact directly with the separation means.

13. (new): A drive unit including

an electric motor,

a drive unit casing accommodating therein the electric motor,

an inverter that controls the electric motor, and

a flow passage of a refrigerant that cools the inverter, the drive unit characterized in that the inverter is mounted on the drive unit casing such that a heat sink united with a substrate of the inverter defines a space on a portion thereof opposed to the drive unit casing,

the space is communicated to the flow passage of the refrigerant,

the heat sink comprises heat-sink side fins extending into the space toward the drive unit casing,

the drive unit casing comprises drive-unit-casing side fins extending into the space toward the heat sink,

separation means (6) for preventing thermal conduction is provided in the space, wherein the separation means comprises a low thermal conductive member (61), wherein the low thermal conductive member is shaped to follow contact portions of the heat-sink side fins and the drive-unit-casing side fins, and

both the heat-sink side fins and the drive unit casing contact directly with the separation means, such that both the heat-sink side fins and the drive unit side fins cooperatively generate a common refrigerant flow pattern.

14. (new): The drive unit according to claim 2, further comprising separation means on a mating surface of the peripheral wall of the inverter casing and the mating surface of the drive unit casing.

15. (new): The drive unit according to claim 14, wherein the heat sink side fins and the peripheral wall of the inverter casing are formed as a unit.